



3554 BATTERY HiTESTER

Field Measuring Instruments



Get a Complete Diagnosis of UPS Batteries
with a Single Device



- Auto-hold and Auto-data storage
- Enhanced resistance against noise
- Store up to 4800 sets of data
- PC Interface
- User-exchangeable probe tip

**WIDE
60V RANGE**
Ideal for UPS
Backup Batteries



The New Standard for Assessing Deterioration of Lead-acid Batteries

Repeated recharging of a secondary battery can lead to battery deterioration and increase its internal resistance. Problems can intensify when there is a short-circuit in the internal cell leading to voltage drop, overheating and complete battery malfunction. Worst of all, these problems can cause life-threatening fires and other accidents.



ISO 9001
JMI-0216



ISO 14001
JQA-E-90091



<http://www.hioki.co.jp/>

HIOKI company overview, new products, environmental considerations and other information are available on our website.

HANDS FREE Data Capture Allows You to Focus on the Testing

Fully Automatic Data Capture

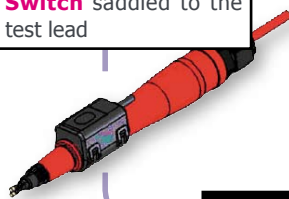
Toggle between 4 different ways to save data

AUTO HOLD & AUTO MEMO

Automatically save data as soon as reading is stabilized

AUTO MEMO

Instantaneously save measurement data with one touch using the **9466 Remote Control Switch** saddled to the test lead



TEST & SAVE

Press the **HOLD** then **MEMO** keys for whenever you need to save data

Save up to **4800 Sets** of Battery Data

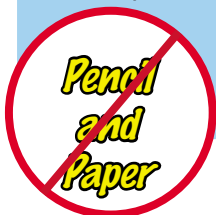
AUTO HOLD

Check stabilized measurement value before saving with the **9466 Remote Control Switch**

Quickly Download Data to a PC via USB Interface - Effortlessly Manage Using Bundled Software

The hassle-free measurement process is extended to data management and processing using the bundled data management software. All 4800 sets of data can be uploaded to the PC quickly and effortlessly via a USB cable, and displayed neatly in table format. Edit comparator tables and send them back to the 3554.

Store and edit up to **200 sets** of comparator settings



Not Required



USB

Table - [sample.csv *]

Enter table Table No: 1

Previous table No. 1 Next table No.

Main Station 1

Range: 30mohm R-Lim1: 15.00 R-Lim2: 20.00

V-Range: 60V V-Lim: 20.00

No	Name	R-Range	R-Lim1[mohm]	R-Lim2[mohm]	V-Range	V-Lim[volt]
1	Main Station 1	30m	15.00	20.00	60V	20.00
2	Main Station 2	30m	10.00	12.00	60V	20.00
3	Main Station 3	30m	15.00	20.00	60V	24.00
4	Main Station 4	30m	5.00	24.00	60V	10.00
5	Main Station 5	3m	2.00			2.00
6	Main Station 6	3m		18.00	6V	2.00
12	Sub Station C-1	3m	2.00	3.00	6V	2.00
13	Sub Station C-2	3m	1.00	2.00	6V	2.00
14	Sub Station D-1	30m	15.00	20.00	60V	12.00
15	Sub Station D-2	30m	11.00	15.50	60V	12.00
16	Sub Station D-3	30m		22.00	60V	12.00
17	Backup A	3m	1.500			
18	Backup B	3m	1.300			
19	PS-1		1			
20	PS-2	300m	2.00			

Save Transfer

Edit and Send Comparator Settings

Automatically clear data from the 3554

Download Data to a Spreadsheet

Download:

- ✓ Data Memory Number
- ✓ Range
- ✓ Resistance value
- ✓ Resistance limits
- ✓ Voltage value
- ✓ Voltage limit
- ✓ Temperature
- ✓ Judgement
- ✓ Date & time



Microsoft Excel - Data254

No	R-Range	Resistance	R-Lim1[mohm]	R-Lim2[mohm]	V-Range	Voltage	V-Lim	Temperature	Judgement	Date & time
9	1.30m	12.00	15	20	60V	12.58			PASS	
10	2.30m	12.01	15	20	60V	12.66			PASS	
11	3.30m	12.05	15	20	60V	12.59			WARN	
12	4.30m	20.27	15	20	60V	11.64			PASS	
13	6.30m	11.98	15	20	60V	12.68	12		PASS	
14	6.30m	12.46	15	20	60V	12.58	12		PASS	
15	7.30m	15.92	15	20	60V	12.01	12		WARN	
16	8.30m	11.95	15	20	60V	12.58	12		PASS	

Tough Against Noise Plus Wide 60V Range

Trying to measure UPS backup batteries while they are still being used naturally brings about noise coming from the battery's inverter or rectifying circuit. The enhanced measurement current in the 3554 plus fortified circuit design, added with the Averaging Function to handle batteries that have fluctuating measurement values no matter how steady you hold the probe makes the battery tester extra resistant against the adverse effects of noise.



- ✓ **Common battery cells:**
0 to 12V DC
- ✓ **Fork lifts and electric vehicles:** 48V DC

Three-rank rating of battery state: Pass, Warning or Fail

Assessment is based on a 6-way combination of comparisons against upper and lower resistance limits and a voltage threshold. Immediately see the judgement result on the bright LCD and beep on your choice of PASS or WARNING/FAIL.

Resistance	Low	In Range	High
VOLTAGE			
High	Pass	Warning	Fail
Low	Warning	Warning	Fail

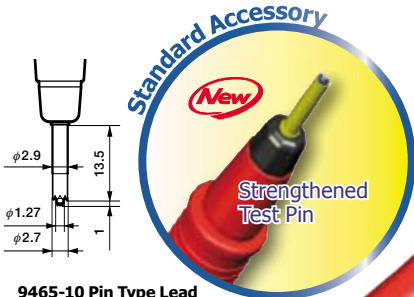
Voltage threshold value ▶ First resistance limit ▲ Second resistance limit ▲

10 Hours of Continuous Operation

Save time and money with an uninterrupted workflow

Wide Selection of Tough and Versatile Test Probes

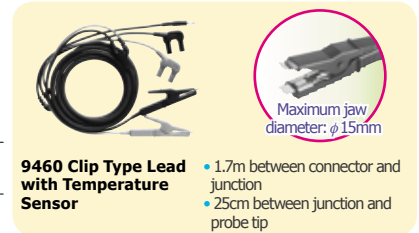
The standard 9465-10 Pin Type Leads with the single test pin on each lead has been fortified to withstand even the toughest use, while a new dual-axis mechanism incorporated in the new 9772 Pin Type Lead allows the TWO pins in each test lead to move independently. Just in case of breakage, the pins on both the 9465-10 and the 9772 can be replaced easily on site.



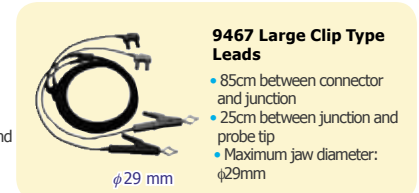
- 9465-10 Pin Type Lead**
(standard accessory)
- 40cm between connector and junction
 - 25cm between junction and probe tip



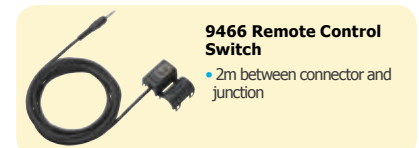
- 9772 Pin Type Lead**
- 40cm between connector and junction
 - 25cm between junction and probe tip



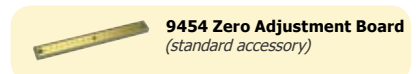
- 9460 Clip Type Lead with Temperature Sensor**
- 1.7m between connector and junction
 - 25cm between junction and probe tip



- 9467 Large Clip Type Leads**
- 85cm between connector and junction
 - 25cm between junction and probe tip
 - Maximum jaw diameter: φ29mm



- 9466 Remote Control Switch**
- 2m between connector and junction



- 9454 Zero Adjustment Board**
(standard accessory)

Diagonal probing is no longer a problem.

The Advantages of 4-Terminal Measurement

The Quality of Your Test Lead CAN Make a Difference

When measuring certain batteries such as lead-acid cells, the resulting measurement value may differ depending on the test leads used to conduct the measurement. This difference is due to the shape of the probe tip as well as the dimensions of the 4-terminal test leads used for measurement. However, despite a difference in value given by different test leads, it is safe to assume that each specific value reflects the correct value obtainable by the respective test leads.

Based on this principle, when diagnosing battery deterioration in a time series, it is particularly important to use test leads having the same tip shape

and dimensions in order to maintain measurement consistency.

The difference in the measurement values obtained by different test leads is a physical phenomenon caused by the difference in distance between the SOURCE and SENSE pins of the test leads. This is more significant when the battery terminal contains a resistance higher than the internal resistance of the battery under test. The figure on the right demonstrates how even minute physical differences between the SOURCE and SENSE pins for two types of test leads can affect the detected voltage level of the battery.

